Gaoming Wang

Yau Mathematical Sciences Center
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RESEARCH INTERESTS

Riemannian Geometry, Geometric Analysis, especially minimal surfaces and mean curvature flows.

EMPLOYMENT

PostDoc, Yau Mathematical Sciences Center	Fall 2023-Now
Visiting Assistant Professor, Cornell University	Fall 2022-Spring 2023

EDUCATION

Ph.D. (Mathematics, 2022) The Chinese University of Hong Kong
Thesis: General theory of PDEs on triple junction surfaces Supervisor: Prof. Martin Li

B.Sc. (Pure and Applied Mathematics, 2017) Tsinghua University
Thesis: The estimation of curvature equations for hypersurfaces Supervisor: Prof. Daguang Chen

PUBLICATIONS AND PREPRINTS

1. *On δ-Stable Minimal Hypersurfaces in $\mathbb{R}^{n+1}$*, submitted, arxiv: 2407.03222, 2024

2. *Allard-Type Regularity for Varifolds with Prescribed Contact Angle*, submitted, arXiv: 2403.17415, 2024

3. *Index of Embedded Networks in the Sphere*, **J. Funct. Anal.** (2024)

4. *Dihedral rigidity in hyperbolic 3-space* (with X. Chai), **Trans. Am. Math. Soc.** (2024), pp. 807-840

5. *Scalar curvature comparison of rotationally symmetric sets* (with X. Chai), submitted, arXiv: 2304.13152, 2023

6. *Generalized Bernstein Theorem for Stable Minimal Plateau Surfaces*, submitted, arXiv: 2210.11500, 2022

7. *General Theory of Partial Differential Equations on Triple Junction Surfaces*, PhD thesis.

8. *Curvature estimates for stable minimal surfaces with a common free boundary*, **Calc. Var. Partial Differential Equations.** 61, 138 (2022)

9. *Uniformization of surfaces with boundary and the application to the triple junction surfaces with negative Euler characteristic*, submitted, arXiv:2110.12656, 2021

INVITED TALKS

2024 Geometry and Analysis Seminar (Tsinghua University)	Mar 2024
Geometric Analysis Seminar for Young Scholars (Sun Yat-Sen University)	Dec 2023
Academic Annual Conference (Beijing Mathematical Society)	Nov 2023
Geometry Seminar (Peking University)	Sep 2023
Geometry Seminar (Stanford University)	Apr 2023

Analysis and PDE Seminar (Johns Hopkins University)   Feb 2023

Differential Geometry Seminar (University of California Irvine)   Jan 2023

Caltech Geometry & Topology Seminar (California Institute of Technology) Jan 2023

Geometric Analysis Seminar (The University of Chicago)   Jan 2023

Geometric Analysis Seminar (Miami University)   Oct 2022

Cornell Analysis and Geometric Analysis Seminar (Cornell University)

Title: Second Order Elliptic Operators on Triple Junction Surfaces   Oct 2022

The 3rd Geometric Analysis Festival (organized by Prof. Hojoo Lee, Jeonbuk National University)

Title: Curvature Estimates for Stable Minimal Triple Junction Surfaces   Jul 2021

HONORS AND AWARDS

- Best Teaching Assistant Award, Department of Mathematics, CUHK   Spring 2020

- Madam Wong Siew Khoon Scholarships, CUHK   Fall 2018

- Third Prize of S.T. YAU College Student Mathematics Contests in Geometry, top 10 out of undergraduate students in China   Summer 2016

- First Prize of Chinese College Students Math Competition in Beijing, top 20 out of undergraduate students in Beijing   Fall 2014

SERVICES

Referee for *Proceedings of the Journal of Differential Geometry, Edinburgh Mathematical Society, Proceedings of the American Mathematical Society*

RESEARCH ACTIVITIES

2nd International Congress of Basic Science (BIMSA)   Jul 2024

Forum in Differential Geometry (Fudan University)   Jan 2024

International Conference on Recent Advances in Nonlinear PDEs and their Applications (CUHK)   Oct-Nov 2023

Beijing Geometry Day (Beijing)   Oct 2023

1st International Congress of Basic Science (BIMSA)   Jul 2023

International Conference on Differential Geometry and its Applications (Jeju Island) Jun 2023

37th Geometric Festival Princeton University (Princeton)   Apr 2023

Upper New York State Geometric Analysis Workshop 2023 (Cornell)   Apr 2023

The 28th Southern California Geometric Analysis Seminar (UCI)   Mar 2023

The Northeast Workshop in Geometric Analysis (University of Connecticut) Nov 2022

Conference on Differential Geometry (Lehigh University)   Oct 2022

The 27th Southern California Geometric Analysis Seminar and winter school (UCI) Feb 2020

Graduate Student Seminar on Geometric Analysis (CUHK)   2019-2022

Utrecht Summer School of Geometry (Utrecht University, Netherlands)   Summer 2016

TEACHING EXPERIENCE

Cornell University

- MATH 1120: Calculus II   Spring 2023
- MATH 1110: Calculus I   Fall 2022

The Chinese University of Hong Kong (as teaching assistants)

- MATH 2050: Mathematical Analysis I   Spring 2022
- MATH 4030: Differential Geometry   Fall 2021
- MATH 5061: Riemannian Geometry I   Spring 2021
- MATH 2050: Mathematical Analysis I   Spring 2021
- MATH 2050: Mathematical Analysis I   Spring 2020
- MATH 2020: Advanced Calculus II   Fall 2019
- MATH 1030: Linear Algebra I   Fall 2018-Spring 2019